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Atty. Dkt. No. 346715-0632

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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: BABICH et al.

Title: TECHNETIUM-AND  
RHENIUM-BIS  
(HETEROARYL)  
COMPLEXES, AND METHODS  
OF USE THEREOF

Appl. No.: 10/589206

International 2/14/2005

Filing Date:

371(c) Date: 8/11/2006

Examiner: Not yet available

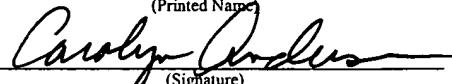
Art Unit: Not yet available

Confirmation Not yet available  
Number:

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**CERTIFICATE OF EXPRESS MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service's "Express Mail Post Office To Addressee" service under 37 C.F.R. § 1.10 on the date indicated below and is addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

EV 961803221 US (Express Mail Label Number)	February 7, 2007 (Date of Deposit)
Carolyn Anderson (Printed Name)	
 (Signature)	

## TRANSMITTAL LETTER

Transmitted herewith for filing in the above-referenced patent application are the following documents:

- ✓ Information Disclosure Statement Under 37 CFR § 1.56 (3 pgs.);
- ✓ Form 1449 – Information Disclosure Citation (2 pgs.);
- ✓ References (24 documents); and
- ✓ Return Receipt Postcard.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-3431.

Respectfully submitted,



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Date: February 7, 2007



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 (Signature)	

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Commissioner for Patents  
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Sir:

Submitted herewith on Form PTO-1449 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56.

A copy of each non-U.S. patent document and each non-patent document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

**TIMING OF THE DISCLOSURE**

The listed documents are being submitted in compliance with 37 CFR §1.97(b), before the mailing date of the first Office Action on the merits.

**RELEVANCE OF EACH DOCUMENT**

All of the documents are in English.

Applicants respectfully request that each listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO-1449 be returned in accordance with MPEP §609.

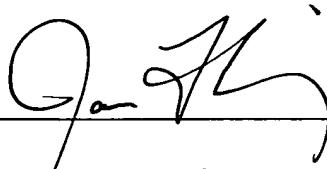


Atty. Dkt. No. 346715-0632

Although Applicant believes that no fee is required for this Request, the Commissioner is hereby authorized to charge any additional fees which may be required for this Request to Deposit Account No. 50-3431.

Respectfully submitted,

Date Feb 7, 2007

By 

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Form PTO-1449 (MODIFIED)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE
O P E R A T I O N INFORMATION DISCLOSURE CITATION	
FEB 07 2007 (Use several sheets if necessary)	

ATTY. DOCKET NO. 346715-0632	SERIAL NO. 10/589, 206
APPLICANT BABICH et al.	
FILING DATE 2/14/2005	GROUP ART UNIT To Be Assigned

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPROPRIATE
	A1	20030235843	12/25/2003	Babich et al.	435	6	3/11/2003
	A2	20020061599	5/23/2002	Elling et al.	436	518	12/29/2000

## FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION	
							YES	NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

C1	Abufarag et al.; "Zinc Complexes of the Ligand Dipicolylglycine", Inorganic Chemistry 34(8): 2207-2216, (1995)
C2	Alberto et al.; "Application of Technetium and Rhenium Carbonyl Chemistry to Nuclear Medicine. Preparation of [Net 4] 2 [TcC <sub>13</sub> (CO) <sub>3</sub> ] From [NBU <sub>4</sub> ][TcO <sub>4</sub> ] and Structure of [NEt <sub>4</sub> ][Tc <sub>2</sub> (μ-Cl) <sub>3</sub> (CO) <sub>6</sub> ]; Structures of the Model Complexes [Net <sub>4</sub> ][Re <sub>2</sub> (μ-OEt) <sub>2</sub> (μ-OAc)(CO) <sub>6</sub> ] and [ReBr{CH <sub>2</sub> S(CH <sub>2</sub> ) <sub>2</sub> Cl} <sub>2</sub> ](CO) <sub>3</sub> ", Transition Met. Chem. 22: 597-601, (1997)
C3	Alberto et al.; "A Novel Organometallic Aqua Complex of Technetium for the Labeling of Biomolecules: Synthesis of [ <sup>99m</sup> Tc (OH <sub>2</sub> ) <sub>3</sub> (CO) <sub>3</sub> ] <sup>+</sup> from [ <sup>99m</sup> TcO <sub>4</sub> ] <sup>-</sup> Aqueous Solution and Its Reaction with a Bifunctional Ligand", J. Am. Chem. Soc. 120: 7987-7988, (1998)
C4	Banerjee et al.; "(Re <sup>III</sup> Cl <sub>3</sub> ) Core Complexes with Bifunctional Single Amino Acid Chelates", Inorganic Chemistry 41(22): 5795-5802, (2002)
C5	Banerjee et al.; "Bifunctional Single Amino Acid and Chelates for Labeling of Biomolecules with the {Tc(CO) <sub>3</sub> }+ and {Re(CO) <sub>3</sub> }+ Cores", Inorganic Chemistry 41(24): 6417-6425, (2002)
C6	Cox et al.; "Catecholate LMCT Bands as Probes for the Active Sites of Nonheme Iron Oxygenases", J. Am. Chem. Soc. 110: 2026-2032, (1988)
C7	Davidson et al.; "A New class of Oxotechnetium (5+) Chelate Complexes containing a TcON <sub>2</sub> S <sub>2</sub> Core", Inorganic Chemistry 20(6): 1629-1632, (June 1981)
C8	Hom and Katzenellenbogen. "Technetium-99m-Labeled Receptor-Specific Small Molecule Radiopharmaceuticals: Recent Developments and Encouraging Results", Nuclear Medicine & Biology 24: 485-498, (1997)
C9	Kung et al.; "Synthesis and Biodistribution of Neutral Lipid-soluble Tc- <sup>99m</sup> Complexes that Cross the Blood-Brain Barrier", The Journal of Nuclear Medicine 25: 326-332, (1984)
C10	Kung et al.; "Synthesis of New Bis(aminoethanethiol) (BAT) Derivatives: Possible Ligands for <sup>99m</sup> Tc Brain Imaging Agents", J. Med. Chem. 28: 1280-1284, (1985)

\* EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include any copy of this form with next communication to applicant.

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O I P INFORMATION DISCLOSURE CITATION  FEB 07 2007 P A T E N T & T R A D E M A R K O F F I C E		APPLICANT BABICH et al.			
		FILING DATE 2/14/2005	GROUP ART UNIT To Be Assigned		
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)					
	C11	Kung et al.; "New Tc-99 Complexes Based on N <sub>2</sub> S <sub>2</sub> Ligands", The Journal of Nuclear Medicine 28(6): 1051 (Abstract No. 719), (June 1986)			
	C12	La Bella et al.; "In Vitro and in Vivo Evaluation of <sup>99m</sup> Tc(I)-labeled bombesin analogue for imaging of gastrin releasing peptide receptor-positive tumors", Nuclear Medicine and Biology 29(5): 553-560, (2002)			
	C13	Maresca et al.; "Synthesis and Characterization of a Binuclear Rhenium Nitropyrazole Complex [Re <sub>2</sub> O <sub>3</sub> Cl <sub>2</sub> (PPh <sub>3</sub> ) <sub>2</sub> (C <sub>3</sub> H <sub>2</sub> V <sub>3</sub> O <sub>2</sub> ) <sub>2</sub> ]", Inorganica Chimica Acta 260: 83-88, (1997)			
	C14	Maresca et al.; "Cationic Complexes of the '3 + 1' Oxorhenium– Thiolate Family", Inorganica Chimica Acta 297: 98-105, (2000)			
	C15	Nelson et al.; "Strong-Field Nonconjugated Polyamine Ligand: Low-Spin Iron(II) and High-Spin Nickel(II) Complexes", J. Chem. Soc. (A), pp. 272-276, (1968)			
	C16	Nicholson et al.; "The Synthesis and Characterization of [MCl <sub>3</sub> (N=NC <sub>5</sub> H <sub>4</sub> NH) (HN=NC <sub>5</sub> H <sub>4</sub> N) ] from [Mo <sub>4</sub> ] <sup>4-</sup> (Where M= Re, Tc) Organodiazenido, Organodiazene-Chelate Complexes. The X-Ray Structure of [ReCl (N=NC <sub>5</sub> H <sub>4</sub> NH) (HN=NC <sub>5</sub> H <sub>4</sub> N)]", Inorganica Chimica Acta 252: 421-426, (1996)			
	C17	Okuno et al.; "Oxidation of cyclohexane with hydrogen peroxide catalysed by copper(II) complexes containing N,N-bis(2-pyridylmethyl)- $\beta$ -alanineamide ligands", Polyhedron 16(21): 3765-3774, (1997)			
	C18	Reedijk, J.; "Medicinal Applications of Heavy-Metal Compounds", Current Opinion Chemical Biology 3: 236-240, (1999)			
	C19	Rose et al.; "Synthesis and Charaterization of Organohydrazino Complexes of Technetium, Rhenium, and Molybdenum with the {M( $\eta$ 1 -HxNNR) ( $\eta$ 2-Hy NNR)} Core and their Relationship to Radiolabeled Organohydrazine-Derivatived Chemotactic Peptides with Diagnostic", Inorg. Chem. 37: 2701-2716, (1998)			
	C20	Salmain et al.; "Labeling of Proteins by Organometallic Complexes of Rhenium (I). Synthesis and Biological Activity of the Conjugates", Bioconjugate Chem. 4: 425-433, (1993)			
	C21	Schibli et al.; "Influence of the Denticity of Ligand Systems on the in Vitro and in Vivo Behavior of <sup>99m</sup> Tc(I)-Tricarbonyl Complexes: A Hint for the Future Functionalization of Biomolecules", Bioconjugate Chemistry 11(3): 345-351, (2002)			
	C22	Van Staveren et al.; "Spectroscopic Properties, Electrochemistry, and Reactivity of Mo <sup>0</sup> , Mo <sup>I</sup> , and Mo <sup>II</sup> Complexes with the [Mo (bpa) (CO)] Unit [bpa = bis (2-picoly)amine] and their Application for the Labelling of Peptides", Europ. J. Inorg. Chem., pp. 1518-1529, (2002)			
	C23	International Search Report for PCT/US05/04407 mailed June 29, 2005			
	C24	International Search Report for PCT/US05/04448 mailed July 6, 2005			
EXAMINER			DATE CONSIDERED		
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